

P2: Needs Assessment and Actions: What Are the Gaps?

- What needs to be done to address the documented threats to human health from water, sediments and biota in Puget Sound?
- What criteria should be considered for prioritizing actions to address human health?

Current Actions That Appear to Be “On Track?”

Source Reduction Programs

- Department of Ecology
 - Hazardous Waste and Toxics Reduction Program
 - Pollution Prevention, Beyond Waste, Technical Resources for Engineering Efficiency (TREE), lean manufacturing
 - Persistent Bioaccumulation Toxics (PBT) regulations and strategy
 - Mercury and PBDE action plans

Current Actions That Appear to Be “On Track?”

Management Programs

- Department of Health shellfish and fish advisory programs
 - Interactive fish/shellfish consumption advisory maps can be accessed at <http://www.doh.wa.gov/ehp/oehas/fish/ps.htm>
- The BEACH program jointly administered by the Departments of Health and Ecology monitors water quality at high-risk marine swimming beaches
 - Interactive maps can be accessed at <http://www.doh.wa.gov/ehp/ts/waterrec/beach/default.htm>

Current Actions That Appear to Be “On Track?” *Cont’d*

Management Programs *(cont’d)*

- An Ecology Memorandum of Understanding (MOU) for larger cruise ships requires these vessels to treat sewage onboard with advanced wastewater treatment systems (AWTS).

Cleanup Programs

- Ecology’s Toxics Cleanup Program has been effective in moving sites toward cleanup

Gaps Between What We Have and What We Need...

- Lack of specific information about use of the resource
 - Assumptions about consumption of fish and shellfish by tribes and other high-end users require review
- BEACH program does not cover all of the Sound's popular swimming areas
 - Some threats may exist that are not being addressed
- Pathogen loading to Puget Sound from vessels not covered by Ecology's MOU

Gaps Between What We Have and What We Need *Cont'd*

- Contribution of pathogen loading from on-site sewage systems is unknown
- “Emerging” pathogens and biotoxins
 - Not included in existing monitoring efforts
- Toxics in shellfish
 - PBTs less of a concern than finfish but metals not well characterized

Gaps Between What We Have and What We Need *Cont'd*

- Enhance coordination of data collection between state/local agencies and Tribes
- Effectiveness of public education and outreach programs
 - Not well-understood

What Areas/Issues Need Greatest Attention/Action and Why?

- Limitations on harvesting and consuming fish and shellfish from Puget Sound
- Impact of PBTs on the environment and ultimately on our ability to harvest and consume local seafood

How to Choose: Specific Strategies for Addressing Areas for Action *Cont'd*

- Improve management of older and under-functioning on-site sewage systems
- Improve land use regulations and guidance to manage stormwater
 - Limit the amount of impervious area to reduce stormwater volume that needs to be managed

How to Choose: Specific Strategies for Addressing Areas for Action *Cont'd*

- Improve and update wastewater and stormwater infrastructure
- Reduce pollutant discharges that threaten shellfish resources
- Expand and accelerate work related to PBTs

How to Choose: Criteria for Prioritizing Human Health Actions

- Address greatest exposure
 - Consumption of fish and shellfish contaminated with toxics and/or pathogens
- Reduce the source
 - Source control rather than management
- Eliminate the threat

How to Choose: Criteria for Prioritizing Human Health Actions *Cont'd*

- Benefits populations that are disproportionately affected by exposure
 - Frequent consumers of fish and shellfish due to cultural or economic reliance on the resource
- Cost effective
- Considers severity of endpoint

How to Choose: How Will We Know We Are Making Progress on Human Health?

- Establish a current baseline of conditions relative to all potential threats
- Identify indicators to measure progress
- Harvesting of resource has increased
- Data gaps are reduced

How to Choose: How Will We Know We Are Making Progress on Human Health?

Cont'd

- Increased effective communication with the public
 - Develop measure
- Increase coordination within and between federal, tribal, state, and local governments and other entities